

Title (en)
ULTRA-WIDEBAND DATA TRANSMISSION SYSTEM

Title (de)
ULTRABREITBAND-DATENVERMITTLUNGSSYSTEM

Title (fr)
SYSTEME DE TRANSMISSION DE DONNEES A ULTRA LARGE BANDE

Publication
EP 1238501 A1 20020911 (EN)

Application
EP 99962869 A 19991129

Priority
US 9927986 W 19991129

Abstract (en)
[origin: EP1919147A1] A waveform adaptive transmitter that conditions and/or modulates the phase, frequency, bandwidth, amplitude and/or attenuation of ultra-wideband (UWB) pulses. The transmitter band-limits UWB signals within spectral limits for use in communication, positioning, and/or radar applications. One embodiment comprises a low-level UWB source (e.g. and impulse generator (100) or time-gated oscillator (106)), a waveform adapter (e.g. digital or analog filter (102), pulse shaper, and/or voltage variable attenuator (112)), a power amplifier, and an antenna to radiate a band-limited and/or modulated UWB signals. In a special case where the oscillator has zero frequency and outputs a DC bias, a low-level impulse generator impulse-excites a bandpass filter to produce an UWB signal having an adjustable center frequency and desired bandwidth based on a characteristic of the filter. The UWB transmitter is capable of extremely high pulse repetition frequencies and data rates in the hundreds of megabits per second or more, frequency agility on a pulse-to-pulse basis allowing frequency hopping if desired, and extensibility from below HF to millimeter wave frequencies.

IPC 1-7
H04L 27/04

IPC 8 full level
H04B 1/04 (2006.01); **H04B 1/69** (2011.01); **H04L 25/03** (2006.01); **H04L 27/34** (2006.01); **H04B 1/713** (2011.01)

CPC (source: EP)
H04B 1/71635 (2013.01); **H04B 1/7174** (2013.01); **H04L 25/03828** (2013.01); **H04L 27/34** (2013.01); **H04B 1/713** (2013.01); **H04B 1/7172** (2013.01); **H04B 2001/6908** (2013.01)

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CN114189255A; IT201900016562A1; EP3092722A4; WO2015103692A1; WO2021053567A1

Designated contracting state (EPC)
AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

DOCDB simple family (publication)
WO 0139451 A1 20010531; AT E389286 T1 20080315; AU 1922100 A 20010604; DE 69938363 D1 20080424; DE 69938363 T2 20080626; EP 1238501 A1 20020911; EP 1238501 A4 20030319; EP 1238501 B1 20080312; EP 1919147 A1 20080507; JP 2003515974 A 20030507

DOCDB simple family (application)
US 9927986 W 19991129; AT 99962869 T 19991129; AU 1922100 A 19991129; DE 69938363 T 19991129; EP 07024618 A 19991129; EP 99962869 A 19991129; JP 2001540480 A 19991129